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ABSTRACT

The purpose of this report is to provide the emerging UNESCO-UNEP International Environmental Education Programme with useful firsthand knowledge about some of the current and potential environmental education programs, personnel, materials, organizations, constraints, and strategies within UNESCO's South Asian region. The report is organized into six summaries covering the following areas: (1) South Asian Environmental Education Program Materials; (2) South Asian Environmental Education Program Personnel; (3) South Asian Environmental Education Related Organizations; (4) South Asian Environmental Education Related Programs; (5) Major South Asian Environmental Education Program Constraints; and (6) Major South Asian Environmental Education Program Strategies. For the purpose of this report South Asia is defined as Sri Lanka, Nepal, Bangladesh, Pakistan, Afghanistan, and Iran. (Author/RH)

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FINAL REPORT OF ENVIRONMENTAL EDUCATION MISSION TO SOUTH ASIA IN 1975— *OVERVIEW* [1]

by

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1.0 INTRODUCTION

1.1 Purpose of this Report. The purpose of this written report is to provide the emerging Unesco-UNEP International Environmental Education Programme with useful firsthand knowledge about some of the current and potential environmental education (EE) programs, personnel, materials, organizations, constraints, and strategies within Unesco's South Asian region.

This report, which presents only one part of a multi-purpose mission, will be used in conjunction with other official reports and data to help design an international environmental education program that most nearly fits the explicit needs of each member state as they define them. The reader should bear in mind that this report represents a tentative, on-going analysis of some of the conceptual and practical problems and opportunities likely to be associated with EE in South Asia. So that the reader may contribute to further analyses of EE in South Asia, impressions of this "Overview" are earnestly sought. A feedback questionnaire is attached to the end of this report to record your reactions.

1.2 Purpose of the Mission. Upon the invitation of each member state, Unesco-UNEP sent an Environmental Education Consultant to:

(a) Assist Ministries of Education in responding to a questionnaire designed to identify needs and priorities within and among selected categories of resources for environmental education (instructional materials, physical facilities, personnel, programmes, organizations and agencies, funding and legislation);

(b) Meet with selected individuals suggested by Ministries of Education, National Commissions, and other appropriate bodies, in an effort to identify both individuals and organizations helpful in assisting the Ministry of Education in furthering environmental education;

(c) Assist in the identification of existing environmental education resource materials within Member States and to share appropriate materials developed by other Member States;

(d) Provide information regarding Unesco's ability to work with Member States, insofar as it wishes, in developing the kind of environmental education programme required.

2.0 OVERVIEW OF ENTIRE MISSION TO SOUTH ASIA: GENERAL CONCLUSIONS AND RECOMMENDATIONS

2.1 Introduction. This "Overview" is organized into six summaries covering the following areas:

(1) South Asian EE Program Materials

(2) South Asian EE Program Personnel

(3) South Asian EE Related Organizations

(4) South Asian EE Related Programs

(5) Major South Asian EE Program Constraints

(6) Major South Asian EE Program Strategies.

For the purpose of this overview, "South Asia" is defined as Sri Lanka, Nepal, Bangladesh, Pakistan, Afghanistan, and Iran. However, many of the observations, concepts, analyses, guiding principles, recommendations, etc. clearly extend beyond these countries.

Ideas and suggestions generated during the early phases of the mission were sometimes carried forward and tested in other countries. Unesco-UNEP is aware of instances where a particular country has differed from the regional trends appearing in this "Overview." The important point, however, is that the South Asian region has many more similarities than differences--at least in terms of potential EE programming. It is perhaps best, then, that Unesco-UNEP's EE program work from what people have widely in common before proceeding to their unique, yet vital, differences.

2.2 Summary: South Asian EE Program Materials.

2.2.1 The ambiguity of EE terminology was a constant problem throughout South Asia. Thus, most countries suggested that Unesco-UNEP develop an international glossary of EE terms with denotations and connotations provided. This should preferably be multilingual and bound under a single cover. This should be prepared by an interdisciplinary team of experts not only in EE, but also in international and cross-cultural communication and semantics.[1]

[1]This writer has, by the way, already begun the development of such a glossary in English, the forerunner of which was published in What Makes Education Environmental?, edited by Noel McInnis and Don Albrecht, (Louisville, Kentucky USA: Data Courier, 1975), pp. 458-61.

Text-type materials should perhaps be produced first by Unesco-UNEP for use by leadership training institutions, and then local instructional aides should be developed. Without the conceptual work being generated first, however, already existing irrelevant or poor quality materials might be re-titled to fit the currently popular words. Thus, one might get the illusion that EE materials were being developed when in fact they are not. Without a clear framework, current non-EE activities might be supported by the new, more popular label. In fact, this can already be seen in some instances.

Information that identifies and analyzes environmental problems is most likely to be used (1) if it is prepared and presented at a relatively low level of specificity, and (2) if the generalizations made remain relatively narrow. But even with the low level development

of generalizations, they must be mined for their concrete field applications. So, the broad overall guidelines and problem diagnoses must come first, followed by regional, sub-regional, and finally local application.

The South Asian region, moreover, should attempt to develop a regional EE sourcebook--but only after pilot programs have been initiated and evaluated and thorough conceptual studies have been undertaken and publically discussed. This puts these resource books at least three years into the future, but this time period is insignificant compared to the long-term risks of poorly developed materials.

Sourcebooks are most practical when they are in the form of a loose-leaf notebook into which new materials can be added as they are produced. Unesco-UNEP might offer incentives for the best ideas/activities which could be added to the sourcebook. (The "Park Practice Program" Series in the U.S.A. might provide a working model of the kind of sourcebook construction I mean.)

Throughout South Asia the aim should be to produce familiar and available low-cost materials. Often materials are developed based upon standards from the more-developed countries when the standards might not fit the situation in a less-developed country. For example, in many of the more-developed countries, they think of movies as an "expensive" audio-visual technique and of slide presentations

as "inexpensive." This, however, is measured against the economic scale of a more-developed country. A less-developed country, on the other hand, does not even have the "inexpensive" audio-visual materials. Thus, it is still expensive and outside of the economic possibility of most of the less-developed countries to afford even the most simply made audio-visual materials.

There are many other assumptions arising from the conditions extant in the more-developed countries which do not fit South Asia. There is a tendency to suggest the high use of written print media, which even assumes that paper to print on is somehow available. Or the assumption is made that, given enough paper, it is of such quality that it can pass without shreading through a printing press. Both assumptions are false--a shortage (and maldistribution) of both the quantity and quality of paper is a major problem throughout South Asia. And, of course, this offers another example of the interrelated-ness of education and other development efforts, such as a pulp and paper industry.

In sum, then, Unesco-UNEP should move away from its heavy print-media orientation if it is to serve the poverty stricken masses in South Asia. The written print media are consumed by the more priviledged who can read and write, and who are mostly urban. The great majority of people can neither read nor write, nor are they urban.

Thus, audio-visual media (often battery operated), are more appropriate than written print media for international EE programs aimed at the poor masses. Audio-visual can leap over the barriers of illiteracy, too. Unesco-UNEP should, for example, develop radio scenarios illustrating how successful problem-solving has taken place. A major EE strategy for South Asia would be the use of public movie theaters. India, few Westerners realize, is the most cinema conscious country in the world. It produces more films and has a much larger movie attendance than, for example, the U.S.A.

Another recommended possibility is that EE materials could perhaps be issue-specific and be developed for problem-sheds rather than for political units. Such materials could attempt to identify environmental problems that physically involve the region (or country) either (1) as a contributing party (a pollution emitter), or (2) as a damaged party (a receptor), or (3) as both. In order to do this, each country, region, or problem-shed could develop a document to provide the basic data upon which EE programs could be based. This might be included as part of an overall master plan.

Also suggested by the South Asians was a need for a country by country EE-related bibliography to assist future EE program coordinators. Furthermcre, country by

country descriptions of the chief characteristics of their educational systems vis-à-vis EE forms and processes could be produced.

Another suggested approach to the development of materials was that EE content could be worked-out for specific target professions, e.g., journalists, engineers, and then packaged specifically for their use. This type of target segmentation has strong support from research in the communication sciences, specifically from social marketing.

Although there were many requests throughout South Asia for EE exhibits and library resource materials, other materials which might be developed and disseminated by Unesco-UNEP might include the following categories:

(1) environmental and educational statistical data,
(2) background articles, books, etc., on EE,
(3) print and non-print EE instructional materials,
(4) EE planning and funding guides and models,
(5) basic and evaluative EE research reports,
(6) EE conference and workshop proceedings, minutes of meetings, and
(7) exemplary EE legal documents (legislation, etc.).

Within each of the above general categories, explicit and denotative (rather than connotative) criteria

for materials selection should be formulated for each user or target group category. These criteria should also be re-evaluated within each Unesco-UNEP EE planning cycle to insure the fit between the materials disseminated and the user's needs. Since the filtering, or gatekeeping, of EE materials is in every case unavoidable and necessary, the bases should be made explicit and widely reviewed and legitimized. This (1) reduces the problem of information overload, (2) controls the wide variance in material quality, and (3) avoids ethnocentric tendencies. The point is that South Asia is very concerned about getting access to the quality EE materials they need.

In sum, then, some key considerations related to EE materials should include:

(1) EE terminology,
(2) textbooks,
(3) sourcebooks,
(4) cost factors,
(5) print versus non-print media,
(6) issue-specific content,
(7) target segmentation,
(8) information need categories, and
(9) materials selection criteria.

2.3 Summary: South Asian EE Program Personnel.

2.3.1 A major problem in South Asia will be finding

the needed quality and quantity of expertise in almost all aspects of EE from planning to evaluation. Although there are a great many very competent experts throughout South Asia--many of whom I had the personal pleasure of meeting with at length--these experts are in tremendous demand by their own governments, by foreign governments and universities, and by international agencies. Therefore, economic and other incentives must be provided to pull them into EE. It must be recalled, however, that although economic inputs are necessary, they are not sufficient in themselves to start EE programs. Technical and managerial skills are also a precondition to effective EE programming.

South Asia seems to feel that the training of teachers for EE roles, and the training of other types of EE progressionals (such as university professors) in third-level educational institutions, are of high priority. These trained teachers, then, can carry EE programs and program content to all levels of education. This observation, by the way, is entirely consistent with the questionnaire responses received from the South Asian area. But another consideration must be analyzed. Since it is easier (fewer psychological and sociological constraints) to teach people new attitudes where few or none have been formed than it is to change someone's attitudes once they have been solidified, then EE should perhaps focus more on pre-service training than on in-service training. In this

way, Unesco-UNEP would be more future-oriented because it is harder to change the present than it is to influence the future.

It is very important in the political organization of EE to follow some well known and very powerful roles of maintaining contacts with people and organizations to be served by EE. For example, the people who make the personal visits to the appropriate constituencies in South Asia should be the same people (or accompanined by the same peole) who contact them on most all EE interactions. And these same contacts (linkers) should develop a well-designed, systematic way of communicating to their constituencies to provide the information they need. Therefore, it should be the role and responsibility of EE consultants to maintain contacts with the people they visited during missions even after they have returned to their native countries--which, of course, is entirely consistent with the original purposes of the mission (see pp. 1-2, herein).

The implications for Unesco-UNEP are that there should be an attempt by Unesco-UNEP to deal as far as possible with the same individuals[1] while helping them formulate national EE policies. And to the extent possible, each Asian country should become acquainted with and deal through the same people in Unesco-UNEP. This communication principle stems to a large extent from the fact that a change in the specific person occupying the role of an EE decision-maker or opinion leader can often have a major

[1]No concept of "exclusiveness" is intended here. On the contrary, the idea is to widen the number of contacts, but from an already existing base of interpersonal contacts.

effect on the EE policy or potential policy under consideration. Furthermore, already existing successful contacts should be used. The concept of "spillover" is particularly important here. The "spillover" principle suggests that cooperation and coordination in one problem area (non-EE) will likely spillover into the EE problem area, thus in effect expanding the functional scope of the organization.

A recommendation coming from most of the countries I visited was that Visiting Professorships for EE experts from the more-developed countries to teach in the less-developed countries for one or two terms should be provided. Also, opportunities for Professors from the less-developed countries to go to the more-developed countries to study EE should also be provided. Thus, we see two major alternatives: (1) bring an EE expert to the area in need, or (2) send someone from the area in need to gain expert skills.

Which alternative is preferable? Each has its advantages and disadvantages. But it is perhaps best in principle to develop EE resource personnel on-site rather than in faraway universities, although the use of these two educational settings could be easily integrated (like the U.S.A. Peace Corps training model). But since each alternative has distinct assets as well as drawbacks, each case should be specifically analyzed on its own merits.

But it is still important to understand that some phases of leadership training can best be done in faraway universities while other phases can best be done locally.

Any training program, however, that uses a one-shot workshop format, without year by year follow-up and reinforcement is destined to be less than effective. One-shot training for EE leadership is usually ineffective unless the newly trained person returns to a highly reinforcing context where those newly acquired skills can be practiced and are rewarded. Paradoxically, however, if that context already existed, then the skills would likely already be present in the system or already moving in that direction.

A major point referred to often by the people interviewed on my mission was the issue related to the learning of new environmental problem-solving skills. The question was "How long and under what conditions will the skills last?" The answer to this problem is currently outside present EE knowledge. Also, there seems to be a questionable assumption that if one had EE skills they could be presently used in most less-developed countries. The implication for Unesco-UNEP is that a person should not be expensively trained for EE unless there will be some niche for him (or her) in his (or her) country's organizational structure.

In sum, then, some key EE personnel considerations relate to:

(1) incentives,

(2) technical and managerial skills,

(3) teacher training (in-service versus pre-service),

(4) maintaining personal contacts, and

(5) gaining outside expertise.

2.4 Summary: South Asian EE Related Organizations.

2.4.1 The following summary comments about South Asian EE related organizations have been categorized into (1) regional organizations, (2) national organizations, and (3) local organizations. Only considerations common across the entire South Asian area are covered in this mission "Overview." Detailed listings and other information about national and local organizations are contained in the respective country reports.

2.4.2 Regional-level organizations. Perhaps a key strategy for South Asia as a whole might be the infusion of EE concepts into the curricular innovations being developed by the Asian Centre for Educational Innovation and Development (ACEID) in Bangkok. Using this structure, fragmented curricular development might be avoided, the guiding principles being (1) that EE should be integrated into every Unesco Sector, and (2) that EE should be placed into the structure of overall country and regional planning.

Within South Asia, a major university could develop a Center for EE Research and Training. This university should already be well established and the new EE Center should be a Unesco-UNEP funded operation. There are, however, some activities already well underway in South Asia. It is my understanding that NCERT (New Delhi) has already proposed a "Workshop on the Development of Curriculum Materials for Primary and Secondary EE" for 1976; and that the World Wildlife Fund in India has already proposed a project for the "Development of Audio-Visual Materials." A major drawback is that many activities held in India would tend to exclude Pakistan for political reasons. Perhaps these activities could be conducted on a more neutral ground so Pakistan could actively participate.

In the development of South Asian EE organizational structures, the guiding principle should be that to the extent possible, existing communication network channels should be used. For example, the Asian Trade Union College is the only trade union workers' education body in Asia, and their communication network can be used. The Asian Press Foundation and its news agency (called "DEPTHnews") could be used for environmental and environmental-education reporting. The Foundation is currently receiving UN monies to train local journalists in population and development reporting, and the Foundation provides a reference system for newspapers.

The tourist industry in Asia, moreover, could be reached through such professional literature as the Indian Hotelkeeper and Traveller. In such a publication the non-environmental specialists in the tourist industry--which adds to many major environmental problems--could be effectively reached. The journal also reaches students training to be tourism professionals.

The UN Economic and Social Commission for Asia and the Pacific (ESCAP) is a regional arm of the UN, and ESCAP has been very interested in environmental affairs. One of ECAFE's new priorities is to avert environmental damage. ECAFE also believes that education has an important role to play in averting environmental damage. In my opinion, and because economic considerations are so vital to environmental policy-making, ESCAP should be closely and actively involved in the Unesco-UNEP Asian EE program.

Since the need for a strong scientific input into EE was shared among the countries I visited, a key organization to link into is the Association for Engineering Education in South and Central Asia (ASESCA). Besides functioning as a source of environmental data for educators, ASESCA can play a key coordination role at the regional and national levels.

In sum, then, some key regional level organizations EE should be coordinated with are:

(1) ACEID,

(2) a new EE center,
(3) NCERT,
(4) ATUC,
(5) Asian Press Foundation,
(6) the tourist industry,
(7) **ESCAP**, and
(8) ASESCA.

2.4.3 National-level organizations. In any South Asian country, the EE program strategies will more likely be effective if they are an integral function of all government ministries in a country rather than just the ministry of education or another ministry. Regardless of the ministry, it seems vital to involve officials at the operational level with all phases EE program development because top officials usually possess less face-to-face operational information than those working on the lower levels. Although a single-ministry EE program approach tends (1) to centralize program control and authority and (2) to have direct linkages to the operational levels, such an approach is likely to lead to a program dominated by that ministry's interests. A coordinating council structure, on the other hand, would be less likely to lead to domination and narrowness because expertise is used from an interdisciplinary mix of agencies.

Private organizations and associations can play an important role in initiating EE programs in South Asia because of their greater flexibility and innovativeness. But government agencies should eventually assume the

major responsibility for such programs if they are to reach the masses, because government serves a much wider constituency than private interest organizations. The point, however, is that they both must be involved in EE from the outset.

2.4.4 Local-level organizations. Unlike the more-developed countries, the key communication networks in South Asia are often rigid tribal structures containing very tightly-knit family ties. Thus, EE success on the local level will (according to related research reports) rest primarily on the personalized communication among people who already know and have trust and confidence in one another, and not on the quantitative distribution of mass distributed print materials.

On the individual organization level, it is perhaps unrealistic merely to communicate an idea to someone in an organization and expect its implementation. Indeed, organizations (as units) tend to go through various stages from the point of initial awareness to full and sustained EE implementation. Furthermore, each stage usually requires different mixes of communication messages and media-types. The key stages, which are almost always sequential yet partially overlapping, are:

(1) where the relevant decision-makers gain some awareness and knowledge about a concept of what EE might be about,

(2) where positive or negative attitudes are formed around some perception about a concept of EE,

(3) where an actual decison is made to plan and develop an EE program,

(4) where, beyond the verbal decison to do something, something concrete is actually done and an EE program in fact begins,

(5) where a continued and sustained EE program is supported and reinforced as well as being continually re-evaluated to accommodate changing needs and new information.

Moreover, on the national level in particular, it is important to note that multi-ministarial and public/private sector integrated planning must take place to be consistent with the EE concept itself. Furthermore, the various organizational decision-making process stages need to be planned for separately because each stage requires different kinds of communication strategies.

2.5 Summary: South Asian EE Related Programs

2.5.1 The following South Asian EE related programs are categorized into (1) regional programs and (2) country-level programs.

2.5.2 Regional-level programs. Since human biology, reporduction, health education, population education, etc. are programs already leaning toward some

convergence and integration in South Asia, then perhaps EE should review its potential contribution to these efforts as early as possible. The population education methodology advocated in South Asia, for example, leans heavily toward Freire's participant-centered problem-solving approach rather than the more teacher-centered approaches--at least in theory. Actual practice, however, varies widely. Thus, at least the theory expounded by South Asian population education should show a high compatibility with the Unesco-UNEP conceptions of what EE can offer.

It has also been recommended by various individuals interviewed that the regional strategy (and possibly the global strategy) should concentrate on a few very select yet wide-spread EE problems and do the job well with research-based tactical mixing and phasing rather than attempting to be all things to all countries (or regions) by spending scarce resources on localized unique, narrowly relevant problems. Moreover, Unesco-UNEP should attempt to package such a "concentration" for use by different audiences--but without losing the core structure of the EE concept itself.

EE can be easily related to literacy and adult education programs throughout South Asia. But since literacy seems to be a precondition of development and since development is the overall goal, then any positive influence that EE programming might have on making

literacy programs more relevant should be desirable.

A prime role of literacy is that it opens new channels of mass communication to the poor, and mass media exposure seems to stimulate development. And through these new channels (and often the only "outside" channels) messages about environmental enhancement and improvement can travel. So, when there is a needed message, it makes sense to support and build channels that can deliver it--and that means more literacy programs. Also, with increased literacy, people tend to seek more information to improve their lives. So information seeking behavior and literacy seem to be related too.

2.5.3 Country-level programs. Throughout South Asia it was felt that the identification of the "environmental problems" that EE is supposed to help solve should be a prerequisite to EE program building. Otherwise, EE might be perceived as a "solution" looking for a "problem." But, of course, problem identification is part of what EE itself is about. Assuming that everyone does have some interaction with their environment, and that some problems (whatever the scale and intensity) are outside their awareness, then EE's role might be to begin this initial awareness.

A program idea suggested a number of times during the mission was that Unesco-UNEP programs should provide short-term training in one or two of EE's basic concepts

to large numbers of people rather than long-term training in sophisticated EE concepts to a small corps of highly trained professionals. The enigma, though, is who is going to provide even the short-term training in a few basic concepts. Perhaps a few highly trained professionals should be trained first in order to do the later.

An interesting program suggestion emerging was that since interpretive guides already exist for hords of religious shrines throughout South Asia, then there seems to be no reason why such "guide positions" could not be expanded or created to interpret ecologically interesting sites. With the large tourist demand (foreign and domestic), such possibilities could also lead to increased employment.

Thus, on the country-level, key South Asian suggestions centered around (1) the identification of environmental problems, (2) short-term versus long-term training, and (3) the use and expansion of already existing interpretive guides.

2.6 Summary: Major South Asian EE Program Constraints

2.6.1 For the purpose of this summary, the major South Asian program constraints have been grouped into five broad categories:

(a) the lack of accurate EE information,

(b) the lack of EE skills,

(c) the differing frames of reference,

(d) the lack of a reinforcing social climate for EE, and

(e) the absence of incentives to do EE programming.

Each of the above categories, though partially overlapping, will be summarized below.

2.6.2 The lack of accurate EE information. Unesco-UNEP was highly commended throughout South Asia for sending a consultant and for providing immediate information in a question-and-answer manner about the emerging international EE program. The relationships with the Unesco national commissions were well established and participation of local groups began immediately.

Accurate information from the outset is vital, particularly when a new program is emerging. The power of the present images about EE--especially in an EE image vacuum, which existed prior to the mission, can either guide or misguide the allocation of resources for EE for a very long time to come. Therefore, a very clear delineation of alternative conceptions of EE at the outset must be forthcoming and continually reinforced.

The degree of accuracy of the information that Unesco-UNEP channels to South Asia will be related to the communicator's understanding and ability to apply basic semantic principles while communicating about EE. Often it is assumed that because the same

symbols or sounds are passed among people that they are attaching very similar meanings to those symbols and sounds. In fact, during my consultant mission, I found that through the application of a few semantic tests for meaning congruence, there had been a tremendous variation in the meanings of the EE words we had been using. To accurately communicate, then, I found it necessary to explain through triangulation and locally gleaned examples the particular sense I meant when using a presumably familiar term.

In one instance in particular there was much confusion about the word "environment" as used in "EE." Many leaders in South Asia, for example, have studied education abroad in the U.S.A. Their courses in educational psychology taught them to speak of "learning environments", "environmental learning", and "environmental education." But, the psychologist uses the term "environment" in a narrower sense than Unesco-UNEP. The educational psychologist is referring principally to the psycho-sociological milieu surrounding the pupil. Indeed, the educational psychologist usually is not speaking of the biophysical/chemical/ecological dimensions in the same sense as the human ecologist.

This confusion, however, is not unique to South Asia. It has also produced many problems in, for example, the U.S.A. and Europe as researchers have tried to retrieve

EE literature by using standardized descriptors. Unless those distinctions are overtly recognized and dealt with, increased frustration may likely result. And people tend to avoid those concepts and situations that produce frustration.

The semantics of EE are likely to create serious communication difficulties during the first few years of EE in particular. Although there are many communication skills for dealing with the semantic problems, it is unlikely they will be applied. Besides the general lack of knowledge of semantic principles and skills, there is an understandable and predictable preference for the abstract, ambiguous versions of EE so that on-going personal and institutional interests can be re-legitimized under a new title; that is, new words are euphemistically substituted for the old, leaving systemic forms and processes unchanged. And it is the later that determines the nature of the output, not word substitutions. This is likely to be a major problem throughout South Asia (and other regions too) unless intentionally averted at the outset by a clear operationalization of terms from the very beginning.

In translating the body of EE jargon into whatever language, Unesco-UNEP might begin with the traditional and local terminology for each specific concept and then select the most appropriate word or words to transfer the meaning. It is what the words mean to the client audiences, not to the sources, that eventually determines impact.

Beyond the semantic requirements of filling South Asia's need for accurate EE information, there are specific categories of information the absence of which severely constrains EE program development. Not only must there be more detailed information generated and communicated about South Asia's environmental problems per sé, and their EE problems as well, but the information itself (whatever its source) needs to be evaluated for its reliability and validity.

There is a great difference between the usefulness of "any" information per sé, and of "good" information. The evaluation of the message reliability and validity, of data completeness and accuracy requires (1) statistical knowledge as well as (2) in-depth knowledge of the subject matter at hand. In other words, such evaluation of information is primarily more a technical matter than an intuitive one. And, of course, the South Asian leaders with the "best" information are more likely to make the best development decisions. That is clear, as the people interviewed often stressed.

Most significantly, perhaps, is the fact that if South Asia is going to move toward foreseeing and avoiding adverse ecological impacts rather than just reacting to them once the impacts become critical, then they will need "good" information to do so. In sum, then, South Asia lacks "good" anticipatory information. The implication

for Unesco-UNEP is that planning must go into the development of "good" information delivery systems. And the Unesco-UNEP EE program was very highly commended for its realization of this need and its current activities which help to eliminate the lack of good information.

In sum, then, South Asia's lack of adequate EE information centers around problems of:

(1) the timing of information dissemination,
(2) a wide variance of word meanings,
(3) ambiguity leading to frustration and EE concept avoidance,
(4) unoperationalized terms and concepts,
(5) low client-centeredness of messages,
(6) information reliability and validity,
(7) technical skills to evaluate information, and
(8) anticipatory and predictive information needs.

2.6.3 The lack of EE skills. The lack of an EE planning capability is perhaps one of the greatest barriers to EE in South Asia. This capability is clearly linked to trained EE manpower. But the nature of the problem is much more difficult to solve than one might expect. In essence, the root problem is like a vicious circle, a dilemma. The problem is how to introduce a formal problem-solving process into a system that does not already have such a process. Paradoxically, it seems that one needs a problem-solving

process to decide that one in fact needs a problem-solving process. Breaking this vicious circle will not be easy, but clearly some type of intervention is required.

To be absolutely sure this circular interaction is clear, let me restate it. If problem-solving skills could be readily integrated into the system, then such problem-solving skills would not be in demand because the system would already have them. This key dilemma--the vicious circle--is a problem confronting EE planning systems in South Asia. But assuming that resources and the necessary incentives could somehow be generated, the problem-solving skill gap could be filled in part through instruction.

2.6.4 The differing frames of reference. Often it is a questionable assumption that clashes between groups and cultures are restricted to political variances like conflicts of interest, especially between cultures. Indeed, many of the differences between varying perspectives of EE lie in the seldomly stated covert differences in the way cultures perceptually pattern the environments around them. Hindu concepts of environmental perception, for example, are very different from Islamic or Buddhist concepts. Although there is no space to discuss the cultural, historical, and ideological similarities and differences in this report, suffice to say that these "frame factors" have significant implications for EE. Any by no means is the Westernized view of the way the world works the only

view. It also is riddled with sets of untested (and perhaps untestable) underlying assumptions about the nature of "reality." Thus, the assumption that people are speaking from the same frame factors can be a major source of conflict concerning the nature and direction of EE internationally.

2.6.5 The lack of a reinforcing social climate for EE. These constraints are contextual in that even if the necessary EE skills and knowledge existed as well as the motivation, the lack of a support system for EE can make any program attempt short-lived. This problem is compounded by the fact that most South Asian countries are still too underdeveloped to absorb EE as Unesco-UNEP seems to envision it. Most South Asian bureaucracies are very routine-oriented and are thus not structured for "problem-solving" types of decisions, although they are moving in that direction. Much of this movement has been stimulated by the very competent (but extremely scarce) leadership I found throughout South Asia. Moreover, without the needed structural changes to create a reinforcing social environment, EE is likely to remain an embellishment that fails to root.

Another precondition to EE, and a persistent constraint, is the fact that official international commitments to EE cannot be made until national commitments have been made. My point is that some factors are prior to

others, and these sequences or decision chains must be systematically looked at and planned for.

Another constraint seldom considered but nevertheless very real for South Asia is the fact that the very people Unesco-UNEP may wish to influence the most about EE are usually the people least likely to be at EE conferences and workshops, the people least likely to read Connect, etc. In South Asia, moreover, the experts who travel in international circles do not usually have much impact on domestic policy. The domestic policy-makers are not well linked to the international community of conference goers, professors, etc. Therefore, it is going to be very difficult for international recommendations to get implemented into national policy. But without that national policy, EE will not get very far nationally, regionally, nor internationally.

2.6.6 The absence of incentives to do EE programming. It is a given that most South Asians are so low on the basic need hierarchy (cf. Maslow) that social causes may appear irrelevant to their lives at this point in time. A problem that EE faces in South Asia is of showing its relevancy (1) to environmental problem-solving and (2) to the desired educational policies and practices. The significant point is that before people begin to environmental problem-solve, wherever they are, they are going to have to

associate personal and collective reward with personal and collective effort. In fact, there is a lot of potential EE expertise in South Asia. But to get those human resources into the EE mainstream and to play an active role in its development requires incentives.

One of the many important lessons EE can learn from family planning research (and there are scores of such lessons to be learned) is that even when the barriers to a new program are weak or even non-existent, like maybe in the case of EE, there is still no assurance that (1) EE will be diffused and adopted or that (2) any adoption occuring will continue for very long. There must be strong motivational forces operating to make it work. In the case of EE, even a weak-motive may lead to overt adoption--but the sine quo non is that motivation must be provided and continually reinforced. And such is not likely to occur by accident.

The Unesco-UNEP EE Program must be cognizant of the fact that, on the one hand, membership in Unesco-UNEP for the more-developed countries is regarded less in terms of the access to EE resources it provides them and more in terms of the influence opportunities it offers over all member states. But for the less-developed countries, on the other hand, Unesco-UNEP membership means (1) more access to resources which gives them more influence capability, and (2) increased control opportunities over all

countries. Consequently, the less-developed countries have little to lose, and much to gain, by supporting the Unesco-UNEP EE program. Unless they are highly alienated by what Unesco-UNEP EE is providing, collaboration is very likely and predictable. Thus, there is little doubt that the program will receive the needed support--but local action, locally initiated, and locally funded is a wholly different situation which needs different sets of incentives. Unesco-UNEP EE must begin identifying these incentive possibilities.

Often incentive systems backfire. For example, the political press for action--as if action, almost any action, by itself solves problems--without carefully guided and integrated components may, in fact, be an anti-incentive in disguise. Why? Because this political push to do something often shoves implementation ahead of something planned well enough to be implemented effectively in the first place. This political press to move too fast has in parts of the more-developed world already created much negative EE backlash. Thus, incentives must be balanced with adequate timing, phasing, and other readiness factors in order to have their positive pay-offs. The implications for Unesco-UNEP are (1) that the motivational determinants for EE adoption behaviors should be delineated through valid and reliable means and applied as rapidly as possible and (2) that environmental communication strategies should

be designed to generate incentives which are known to influence patterns of EE adoption behaviors.

2.6.7 Other constraints and some opportunities. A few of the other major constraining forces stated or implied by the South Asians I interviewed are grouped below. Some inhibiting factors tending toward inaction might be identified as the extent to which EE:

(1) is highly ideologically, historically, or culturally ethnocentric,

(2) is wide in scope and inequitably distributes costs and benefits,

(3) is irreversible and/or inflexible,

(4) is wide in focus (that the action component is too broadly targeted),

(5) has a high uncertainty of consequences (that it is risky),

(6) is abstract and complex as a concept,

(7) is unable to use the social research knowledge-base that already exists (a knowledge utilization problem).

While constraining forces are at work, there are--on the other hand--many major facilitating factors tending toward action in South Asia. Some can be identified as the extent to which EE:

(1) is non-ideologically, historically, or culturally ethnocentric,

(2) is limited in scope (has a determinable distribution of costs and benefits),

(3) is reversible and flexible,

(4) has a single, focused target for its action component,

(5) has highly predictable consequences,

(6) is a simple, concrete, and thus highly communicable concept,

(7) is preceded by a high degree of problem recognition,

(8) is an emphathically shared concept among members of the South Asian community,

(9) reinforces the existing social networks,

(10) is implemented on existing knowledge-based strategies.

2.7 Summary: Major South Asian EE Program Strategies.

2.7.1 This summary of strategies discusses the following elements:

(a) Developing Incentives.

(b) Popular Participation.

(c) Maintaining Independence.

(d) Indigenous Development Goals.

(e) Overall Development Goals.

(f) Technology Transfer.

(g) Formal Versus Non-Formal Education.

(h) Reaching the Rural Masses: Key Approaches.

(i) Selecting Pilot Projects.

(j) Research for Unesco-UNEP Paris.

(k) Regional Offices and Readiness.

(l) Building Relationships Between South Asia and Unesco-UNEP.

(m) Centralized Descentralization.

(n) Toward a Global Strategy.

2.7.2 Developing Incentives. A necessary precondition to the initiation of efficient and effective EE programming in South Asia appeared to be the provision of incentives, which was the central finding of my South Asian mission and is, therefore, the central message of this entire mission report.

Clearly, the absence of objection to EE is not sufficient to launch EE. The necessary structural arrangements must also be provided to stimulate and create a reinforcing social climate for the continued nourishment of EE--a guiding notion that I shall no doubt state and re-state many times. In fact, it seems to be a questionable assumption that recommended programs will begin automatically just because the need for EE is there and has been recognized. The South Asian community often commented that, in effect, recommendations very often appear on the whole to be like a great many bottles thrown out to sea, which are not picked up by policy-makers nor funding agencies.

Incentives function to provide the necessary cues to action, which lead to a political willingness, legislation (permissive or mandatory), funds, and to planning and coordination. The generation of a national EE policy in each country will probably be the major motivating factor in long-range program development. Without policy mandates, few incentives would be forthcoming in South Asia. Therefore, it would be advisable to determine how to start changes in the reward systems to reinforce behavior in the direction of EE. It would likely be a strategic error to focus on changing value systems in the direction of EE as the immediate output of an international EE planning system. Why? Because a generation may pass before anything tangible results. Immediate efforts should aim at developing systems to deliver rewards for building, for example, EE infrastructures.

A possible exception to this strategy might be in relation to EE programs that are already well under way. In these exceptional cases, and there are some, Unesco-UNEP's role might be one of accelerating and legitimatizing these instances. However, a caveat needs to be levied here. The EE concerned national and international agencies, for example, might incorrectly read these very early program efforts as a sign that EE is now becoming widespread because some immediate programming has become visible--although not causally related to the new international EE program in Unesco-UNEP.

The point is, then, that it appears that without a triggering incentive system it is possible (and likely) that new programs will become no more widespread than these initial few programs whose successes, moreover, are apt to be over-inflated. Once again, motivation through some type of incentive system relevant to South Asian need structures must be provided. And information without an appeal that motivates is not likely to have an effect on South Asia. Information by itself, research shows, has little effect, if any, in changing what people and organizations actually do about EE. Overcoming belief in this spurious link between raw information and overt behavior change will be a strategic necessity, and an internal education problem for Unesco and UNEP as well.

2.7.3 Popular Participation. The South Asian community highly commended the Unesco-UNEP EE Program for involving them in the early phases of international program development. The idea of sending not only questionnaires to each member state, but also sending expert consultants was very well received. It was hoped that this would become a regular pattern of the Unesco-UNEP program. In fact, the South Asian community responded with a 100 percent return on the mailed questionnaires which testifies to the intense interest South Asia has in EE program development.

Throughout the mission I heard of the need for popular participation on all levels of program planning, development, implementation, and evaluation. And, to the extent possible, South Asian EE programs should be initiated at the village self-help level with well planned center-local communication and coordination. "EE," it was said, "should help people help themselves." Thus, decentralized local leadership and popular participation become highly advantageous to the local people as well as the nation itself. On the other hand, the less-developed countries must at the same time retain the desired elements of the less-participative management techniques while moving toward more popular participation in general. It was well recognized that each technique has its trade-offs. and a balanced approach must be sought.

The participation of the Asian region in the Unesco-UNEP EE program might be increased in some respects, however. A key suggestion was that the Belgrade "State of the Art" papers should perhaps be developed with a wider range of nationalities and, in particular, more authors from the less-developed countries. Although authors with the needed institutional support and experience to write such papers are hard to find in some areas of the world, perhaps someone without such support and bibliographical access could be teamed up with someone who does have the

resources. Thus, co-authorships could be developed to provide broader views yet maintain minimum scholastic standards. Perhaps the counterpart or co-worker approach would be a key strategy at this late date (or anytime) in the writing process. This should help overcome the over-representation from the more-developed, Westernized part of the world.

More specifically, an experienced EE expert (having in-depth EE knowledge, and good analytic and writing skills) from whatever country should be coupled with someone with fewer EE skills and less experience. This not only increases the diversity of input and creates a political balance, but also serves a training function for the less-expert counterpart. But, of course, this requires more time than "crash programs" permit.

According to the people I interviewed, broad popular participation should mean the planning and development of not only channels to send people information (like Connect), but also the careful and purposeful planning and development of response channels for listening to the popular voices. Thus, Unesco-UNEP should lean toward a "grass roots" policy that emphasizes partnership with local groups in the South Asian region. The powerful interest groups in the region, and within each country, should select their own people to represent them on a region-wide Unesco-UNEP EE committee.

The results of such a strategy are likely to be twofold: One, there will likely be greater Unesco-UNEP contact within the region; and, two, there will likely be increased opportunity for the within-region groups to influence Unesco-UNEP regionally and worldwide. A blend among (1) top-down, (2) bottom-up, and (3) horizontal planning must be carefully designed and based upon the wealth of solid research knowledge that already exists on how to acccomplish this.

The only major reservation was that Unesco-UNEP's EE program may be developing too fast to allow for "grass roots" popular groups to be formed and to begin functioning. There may be little left to influence. South Asia, moreover, moves much more slowly than the highly developed regions. So, they need time for people to grow with the program, and they need time to provide parallel analysis and input.[1] Unesco-UNEP's procedural steps, the persons interviewed said, are right--but the timing and phasing is going to markedly disadvantage them. While some short-term gains result from "crash programs," there are longer-term losses. And it is only the long-term pay-offs that South Asia can realistically look forward to, and with a positive expectancy.

2.7.4 Maintaining Independence. As a result of the mission, I would strongly recommend that Unesco-UNEP

[1] In fact, some groups I met with clearly demonstrated to me that it would take at least one year to respond to questions which, in some cases, Unesco-UNEP wanted answered within weeks. Such frustrating circumstances usually end in a "no response" or only a very superficial "courtesy reply" which yields little or no useful information.

work to help member states maintain their national sense of independence, their sense of autonomy. This can be done, for example, (1) by offering to assist member states only when they specifically request it, and (2) by letting each member state determine the detailed use to which Unesco-UNEP EE aid will be put, but in consultation with the appropriate UN experts.

This trend toward increased national autonomy is a recognition of the impact of external constraints, of outside economic control and social influence from the more-developed countries (in particular) on a nation's development. The South Asian countries I visited are now diagnosing poverty and underdevelopment as a result of multiple forces, many of which are the making of not only their own internal conditions but also of the more economically powerful nations. Thus, there is a distinct move toward increased self-reliance and coalitions among less-developed countries on a regional basis in particular. Unesco-UNEP's international EE program development will be consistent and supportive of such trends to the extent it believes in the equitable balance of global socio-economic power.

2.7.5 Indigenous Development Goals. An emergent and recurrent theme of the mission was the need to redefine what "modernization" means. Thus, countries are beginning to refine in more detail their own development goals--to

define modernization from criteria developed locally rather than using the narrowly economic yardsticks. Broader "Quality of Life" indicators are now being used to define a country's degree of development. The later includes measures of environmental degradation, crime rates, socio-economic disparities, and the like. Unesco-UNEP should adopt the use of "Quality of Life" indicators and gauge its successes and failures against such multiple criteria.

In review, then, indigenous development is no longer being defined within the narrow limits of economic models. There seemed to be a tendency to no longer default culture to economics, to equate development with materialism. Paradoxically, however, EE must be couched in terms of the short-term economic needs of a less-developed country in order to keep from being faded into the last pages of the literally thousands of unfiled UN documents stacked in the corners of South Asian documentation centers. Short-term economic interests of local EE-related programs (in almost all sectors) are still dominating the scene. Local programs often want immediate monies without looking at the larger, longer-range picture that only adequate EE planning can do. In other words, each country and region will be developing its own EE strategy from the range of alternatives available to it. Thus, it is vital that Unesco-UNEP work with an extremely wide-ranged, open-ended

cafeteria of alternatives so they can be of the utmost help to member states.

2.7.6 Overall Development Goals. Another recurrent theme that I discovered throughout the mission was the essentiality of relating EE efforts to the overall development goals of each country. So, besides the "indigenous" criterion (a source factor), a "comprehensivity" criterion (or scope factor) is being applied. EE, it was argued, will be more effective when it works in concert with other societal changes, which means that EE by itself is likely to have little effect on the environment--social and/or biophysical. This observation holds true for the other "educations" as well.

The new styles of development might consider not only the role of media, personnel, organizations, etc., in formal and non-formal education, but also how this "media-personnel-organization-etc." mix can foster development. In other words, the question of what EE can do for education (the major question asked by many of the more-industrialized countries) is perhaps approaching the problem from the wrong end. The question to ask (and to answer) is what can EE do for development. The former assumes the status quo, the educational system, as a given whereas the latter (and less-developed countries) makes no such assumption.

The potential "EE effects gap" issue should be fully explored by Unesco-UNEP EE. That is, will the effects of the various Unesco-UNEP EE projects serve to widen the socio-economic gaps within countries? Will the benefits go entirely into the urban-elite areas, making them better off but leaving the rural peasants the same, thus widening the richer/poorer gap within each member state? Perhaps each proposal for Unesco-UNEP support should include an analysis on how the "EE effects gap" is made narrower (or wider) by the proposed program.

EE should perhaps be linked not only to impending bio-physical resource shortages (due to their finiteness, maldistribution, misues, etc.) but also, and perhaps most importantly, to the need for human development and the qualities valued and needed for that process to occur worldwide. Bio-physical resource development gains its importance to man (and woman) to the extent that it contributes to human development and maintainance. Since EE is about people, EE programs must never forget the "people" when talking about minerals, plants, etc.--reminds the South Asian community.

EE strategies must lead, for example, to increased rural food production, better nutrition, preventive health, basic sanitation, better supply of usable water, and a practical education. EE should be conceptually related to employment and to the work-place environment (rural and

urban) of a labor-intensive job market. Poor farming practices, which may significantly contribute to the problem of excessive particulate matter in the atmosphere, might be a place to start an issue-specific EE program in South Asia. Throughout my mission, I heard that poverty is the worst pollutant--and to the extent that one has lived and worked daily, side by side, with the rural poor in a less-developed country (as this writer did for two continuous years), one is inclined to accept that proposition.

The strongest constructive suggestion I heard in South Asia was that the Unesco-UNEP EE program was not explicitly being conceptually related to the concept of development from the outset. Environmental protection and socio-economic development must be seen as parts of the same process. Thus, I would recommend to Unesco-UNEP as a result of my mission that <u>any EE activity funded be directly and explicitly related to the overall long-range development goals</u> of the country(or countries) involved.

2.7.7 <u>Technology Transfer</u>.[1] Assessing the problems of the transfer of technology (soft and hard) is

[1] "Technology" is defined here broadly to mean the collection of EE strategies, concepts, tactics, techniques, materials, guidelines, etc., which has some demonstrated usefulness somewhere in achieving EE goals and objectives.

a major concern of the South Asian community. In no case should there be an uncritical transfer of an industrialized nation's conceptual frameworks and methodologies to South Asia. Any such form of "intellectual ethnocentrism" should be approached with caution. And many factors will likely affect the analysis of EE innovations for their ethnocentricity. Such factors suggested by various interviews are:

(1) the stage of economic growth,
(2) the dominant cultural patterns,
(3) the current political matrix,
(4) the level of problem urgency,
(5) the timing and phasing,
(6) the degree of decision uncertainty, and
(7) the potential irreversibility of returning things to like they were before the technology transfer.

In order for EE to diffuse and be adopted in many less-developed countries, it must change gears. For example, while most EE in the more-developed world is urban-oriented, EE needs a predominantly rural-orientation for most less-developed countries if it is to narrow the socio-economic gap and reach the vast majority of South Asians. Only about 23 percent of Asia is urban. A question that needs to be repeatedly asked, then, is to what extent, and in what aspects, is the current range of EE models cross-culturally valid?

In addition to different content orientations, the mobilization for EE on the local village level in South Asia will probably require communication strategies, mixes, and modes quite different from those used by the heavily industrialized nations in their pursuit of social change. The Westernized model is unlikely to work very well in South Asia, for it is (1) too complicated and (2) too professionalized for widespread implementation. Moreover, the industrialized nations are material-resource intensive. In South Asia, on the other hand, the need is for EE program designs that can be implemented by village volunteers without large quantities of instructional aids. Moreover, the EE program-effects must be made visible and immediate to have village level acceptance. The whole Westernized model, which is predicated upon high levels of individual and government income is unlikely to work where those preconditions are nonexistant.

There is, however, a definite place and role for the transfer of EE technology between nations and regions of the world. But the emphasis should be placed (1) on critical and intelligent adaptation and (2) on local program generation. Certain ideas will inevitably travel back and forth from one country to another and be modified on each trip. This can be desirable. The rule and guide-line , then, is that a country should adapt, not adopt, another country's EE models (planning models or any kind).

I would recommend that Unesco-UNEP encourage South Asia to explicitly develop such transfer of technology guidelines that may be unique to EE-type innovations. (General transfer of technology guidelines already exist in the literature, though not always applicable to EE-type innovations.)

2.7.8 Formal Versus Non-Formal Education. There was much interest in formal versus non-formal education strategies in South Asia. Yet, at the same time, there was consensus that what was needed most was the planning of education itself as an integrated whole. And there was clear consensus that EE must fully reflect the concept of life-long education, although it was not always clear that this "catch word" was meaning the same thing to various groups, or what concrete activities were implied by such a concept. But all seemed to agree that it was somehow desirable.

Despite the belief in formal/non-formal integration, the formal versus non-formal debate continued. One argument seemed to center around whether the development of formal educational systems (with its attendant teachers, etc.) was a "means" or an "ends." That is, if education systems are just one among many strategies to achieve the goals of development, then why should the bulk of money be put into formal systems when in fact they are often (but not always) so

archaically designed and inefficient delivery systems. But, on the other hand, they argued that formal programs seemed to have some national coordination whereas non-formal programs tended to be highly fragmented and uncoordinated--not only among themselves, but also with the formal sector.

In most cases, the argument went, very few people are reached through formal education. And when they are reached, the quality of what they eventually get is often substandard (but against whose criteria was not clear to me). Perhaps the educational infrastructures need to be developed before the formal education classroom-type EE techniques, for the later--it was said--can only reflect the former. The "end" of all EE monies, it was further argued, should be to develop each country within environmental quality parameters, and not to develop the educational system as an "end" unto itself.[1] It was easy to learn that despite the sound educational theory, current educational practices in many instances in the formal sector did not seem to fit what seems to be what EE could be about in South Asia--survival. It was, however, too premature to come to any definite conclusions, but such a hypothesis can be posited.

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[1] "Formal education" is assumed here to be about the cultural transmission of those skills thought to help individuals and collectives survive, adjust, and/or cope with their environments.

Although dramatic improvements were evident, and competent leadership available (but always scarce), the current effectiveness of the formal education sector throughout South Asia may still be open to question for at least two primary reasons: First, formal education reaches only a very few people. In fact, over 90 percent of Asia's population are not in the formal school systems (regardless of level). But, on the other hand, formal education does reach a country's "influentials"--the power elite, the more literate, higher-income, more urban populations. These groups seem to be the prime benefactors of formal education strategies, thus potentially widening the socio-economic gaps within a country.

To me, it would be a reasonable generalization to say that only to the extent that formal educational systems are adapted to a country's development needs and goals (as locally defined) should EE become a candidate for curricular inclusion. And most countries, to my knowledge, are trying to reduce socio-economic gaps as one of their prime development goals.

The second reason why formal education strategies may still be open to question is because they seem organized around models often imported from the highly-industrialized nations. The later appears to be based on the hidden assumption that in order to "modernize" one must do what the more "modern" countries do. But, paradoxically, if

the "Westernized" models somehow fitted the less-developed countries, then they would not need them because they would already be "modernized" like the Westernized countries. Westernized techniques work best in Westernized systems; non-Westernized techniques work best in countries that are not Westernized. The point is that the educational style must fit the characteristics and needs that correspond to the phase of development (however defined) in which a country finds itself. And this "fit" is best judged locally.

Why can't a South Asian country, for example, organize community schools wherein there doesn't become a class distinction between grade levels and between adult and non-adult education. Families or entire villages could become the "class"--and since they are already highly integrated on the village level, it seems very possible. I know of no Westernized model of EE with such a design.

In sum, then, as a result of my interactions with very educationally competent people throughout my South Asian mission, I believe they should develop their own EE models appropriate for their own stages of development, their own goals, their own means, importing ideas from the "outside" just to help increase the range of options and to avoid making the mistakes others have made. All "educations" in South Asia could, I believe, eventually

emerge into a style of community and national development with environmental parameters functioning as one of the many clusters of inputs.

2.7.9 Reaching the Rural Masses: Key Approaches. It was reflected throughout my experiences in South Asia that if EE is to touch the most serious development problems in a place where the vast majority of the poorest populations still are, then EE is going to have to extend beyond the urban-elite centers to the small village level. This naturally requires education and communication strategies often very different from those found in highly industrialized countries where the mass of people are integrated on different levels and are linked principally through expensive modern media. Two of the key education and communication strategies which seem most promising for EE-type messages among the South Asian poor are discussed below.

The first key approach is through the use of media forums. These are particularly effective because (1) they combine mass and interpersonal media forms and (2) they can stress collective as well as individual problem-solving. Moreover, study groups can be developed around local or national problems without making adult/non-adult or formal/non-formal education splits. As a result of my mission, I personally believe this to be a major EE route to follow throughout South Asia--especially since it fits

well into a community problem-solving model and is consistent with existing forms of social organization in rural peasant life. Furthermore, such a strategy has already been field tested in the region since 1959. By 1965 there were 12,000 such rural media forums alone. So this strategy also has the characteristic of using existing communication channels throughout Asia to encourage community environmental problem-solving.

It is perhaps important to note (because of the fact it is often overlooked) that non-print media are of greater value than print media in South Asian countries if the desired audiences are the poor illiterate masses, however segmented. Why? Because South Asia is still dominated by the oral communication tradition. Almost all communication behavior is word of mouth, which includes everything from face-to-face to public radio broadcasts. The professional storyteller, for example, is still a key diffuser of current events, philosophy, etc. in South Asia and is likely to remain so for some time.

Unfortunately, as exemplified through the Unesco-UNEP EE questionnaire, South Asia leaders seem to put a strong emphasis on print-type media, probably because the bulk of people completing the questionnaire and being interviewed were from the formal education sector where there is a strong urban-type orientation modeled after the

industrialized countries. This, naturally, biases the responses in the direction of making the literate more literate and widening the socio-economic gaps even more. Hence, people with a print orientation are probably over-represented since the bulk of communication Unesco-UNEP uses is a print medium disseminated principally to highly educated people. Statistically, only about 53 percent of Asian adults have reached minimum basic literacy.[1]

The second key approach to reach the rural masses is through the use of the traditional mass media (as compared to the modern electronic mass media). Long before the print or electronic media existed mass media channels were utilized in peasant societies. These channels may have been folk theater, balladeers, traveling poets and storytellers, etc., all of whom carried messages about life-styles. Not only are some of these channel characteristics rarely found in the more-developed nations, but the construction of the messages themselves are different. South Asia, for example, has a tradition of communicating messages through tales, fables, and pictorgraphic symbols whereas Westernized people seem to prefer a mechanistic, linear Aristotelian logic based on Western interpretations and forms of mathematics, physics, and astronomy.

Throughout South Asia there is a trend to depend upon modern communication media, especially printed materials like posters, pamphlets, etc. There is also a

[1] According to Unesco's definition, a person is "literate" who can with understanding both read and write a short simple statement on his (or her) everyday life.

high preference for radios and movies. As mentioned earlier, India has a larger movie industry than the U.S.A. The number of radios in Asia, moreover, has more than quadrupled in the last ten years while newspaper circulation, on the other hand, has grown only moderately.

While these modern media forms play a significant role in widely disseminating information, they are not very effective in influencing people who are hesitant or opposed to a more ecologically-sound and agriculturally productive life-style. Furthermore, in a great many rural societies, the peasant masses never attain a very high level of modern mass media exposure. When they do become highly exposed, they often view the modern media as alien and treat the messages with a great deal of suspicion. Therefore, it seems highly desirable to supplement modern mass media with the more traditional forms of mass media.

Unesco-UNEP in South Asia should perhaps analyze various alternative media forms for their environmental content, and then tap them to carry and receive messages about environmental concerns. The key advantage of using traditional mass media forms, let me re-emphasize, is that they are already well-accepted and long-established.

In the development of a plan to effectively use these media forums and traditional mass media for EE programming, I would also like to suggest that Unesco-UNEP (1) identify key intermediate target groups (professionals,

business, government, and others) and (2) map their influence relationships on the ultimate program targets--the people and/or groups who need the benefits of EE programs the most.

The audience types that yield the highest immediate return as far as overt behavior changes are concerned, on the other hand, are those who:

(1) are the most accessible,

(2) have substantial power in terms of potential resources they could devote to EE, and

(3) are the most susceptible or likely to be responsive to the EE message.

The target groups best meeting the above criteria are probably the large South Asian universities--the best change targets for Unesco-UNEP. The issue that arises, however, is that the audiences meeting the above criteria are rarely the ultimate target groups--the people who work and live in rural South Asia. The poorest people. The majority of people. On the other hand, once EE has taken hold in the university systems, then they can be the major intermediate links to rural South Asia, especially through agricultural and other extension service programs.

In South Asia, adaptive research and agricultural and other extension services can be major tools to deliver EE to the rural poor. But infrastructure building and on-farm programs are essential ingredients. Public

exhibitions which usually include ancient art forms (e.g., puppetry) as well as modern audio-visual techniques are also very popular among the masses. South Asia should also tap the most advanced communication techniques and strategies known--those developed by scholars in the social marketing industry. Such strategies should be reviewed for their potential contribution to EE goals, and to overall development goals.

In sum, then, let me say that since each culture tends to develop its media forms and processes in the direction of reinforcing its own value systems, it is vitally important for each culture to explicitly examine its own media forms and processes as they relate to environmental problem-solving, and to check the consistency between the direction of their media development and the ends sought.

2.7.10 Selecting Pilot Projects. Information from the pilot projects should be systematically gathered for at least three reasons:

(1) to describe, explain, and provide baseline data to help measure and predict change over time,

(2) to provide feedback to help evaluate currently used EE delivery systems and social change strategies.

(3) to provide feed-forward to help guide the development of new EE delivery systems, social change strategies, policy development, and to help increase knowledge utilization.

Any attempt to generate or stimulate EE practice in South Asia, however, should be approached with caution and on a trial basis. Perhaps a 5-year regional plan to test an EE idea would be appropriate at the outset, as many of the people I interviewed suggested. A plan that is self-renewing and revolving would contribute best to South Asian processes and priorities for self-development. And the fact that EE's largest pay-off will most likely be in the neighborhood of 20-years in the future is consistent with the long-range development goals within which a 5-year plan is usually subsumed. Like development itself, EE should be a process of never ending spirals of self-renewing processes.

A theme constantly reiterated throughout South Asia was that the rural villages (about 77 percent of Asia is rural) and the urban poor should receive priority in order to more equitably distribute the benefits derived from EE programs. To increase distributive justice between and within nations, EE emphasis should be given to the environmental concerns of those people who are the most affected by environmental problems and the least able to correct them. This seems to be an overall development theme.

There are also vast differences between urban and rural schools which should be noted. The two major factors that tend to inhibit urban-oriented EE program effectiveness are:

(1) that the big South Asian cities are not representative at all of a country as a whole nor the region,

(2) that many formal school teachers in urban areas are often (but not always) far removed from the mainstream of what is occuring even in the big cities, much less the rest of their country which is predominantly rural.

The above two factors tend to widen the socio-economic gaps even more within a country. Thus, a question that must be asked and explicitly answered by each Unesco-UNEP pilot project proposal is the extent to which the project narrows (or widens) the socio-economic gaps between the major strata within the particular region, sub-region, and the country. Hence, the distribution of the benefits of EE within an audience should become an essential programmatic criterion.

Unesco might consider priority the funding of larger regional level projects and the more comprehensive country projects, rather than small projects which often die after funding stops for lack of an institutional support base. In other words, according to many of the people I interviewed, the role of EE should fit into the larger,

overall country and regional program rather than trying to strike out on its own by creating a sprinkle of unrelated pocket projects. EE should thus become a longer-ranged part of an overall, comprehensive, integrated country plan for socio-economic development--as stressed before.

Indeed, even an effective village-level program may not contribute to overall development purposes unless it has been programatically related to a larger plan of institutional development. To suggest that the approach of putting locally useful short-lived projects into a few communities sprinkled around the region to change KAP (Knowledge-Attitude-Practice) variables is not only presumptuous but also reinforcing the present anti-ecological fragmentary style. It may, in fact, be a strategic mistake to heavily fund local programs directly rather than funding national or regional planning activities that would have a longer-range yet significant pay-off.

In my opinion, the kinds of programs with the best long-range pay-offs would be those having a clear focus with explicit formal relationships with any parallel efforts, and with conceptually sound, valid, and reliable evaluation and **dissemination** components built-in. To me, there seems to be at least three major strategies for finding the most effective methods of delivering EE to South Asian individuals, organizations, and communities--and that is what pilot projects should perhaps attempt to do. They should attempt to find out what works, for what audiences, and under what conditions. They should yield useful knowledge.

First is the "random innovation" strategy. This strategy amounts to providing local groups with the necessary incentives to encourage them to try any EE approach and just intuitively see if it works. The underlying assumption here is that any approach coming from some bureaucracy (like a national government or Unesco-UNEP) would unlikely fit the local system. So, there is little need to test EE approaches used elsewhere. This strategy, however, does not yield information on what EE approaches work best for what audiences under what conditions. There is little, if any, generalizable knowledge generated. The pay-offs are short-range and local.

Second is the "natural experiment" strategy. This strategy follows the learner over a period time to observe and record any changes in the direction of more environmentally-sound behavior. Background data to reflect the context, history, and kinds of environmental messages the learner was exposed to are also collected at the same time. Then, a study of what messages and background factors are associated with what kinds of behaviors is done. After inferences are made about what likely caused what, the kinds of contexts and/or messages that apparently were linked to desired behaviors are then elaborated. Thus, important linkages would be based on rationally derived criteria. To date, however, this strategy has not turned up a great amount of useful information in the social

science research community. Yet some very useful propositions have been developed that can lead to important behavioral insights.

Third is the "systematic field-experiment" strategy. This strategy field-tests promising EE approaches in order to determine for whom and under what circumstances certain mixes of EE techniques and media seem to work. Research money is carefully directed to yield the highest information output for each dollar of investment. This research strategy should be an important programatic area of any agency like Unesco-UNEP wishing to rationally improve its long-range effectiveness since the strategy provides the most solid base upon which to make future program decisions. Thus, program development can be made deliberate, systematic, and can be aimed at the desired end to yield both effective and efficient programs.

The greatest need, therefore, is for a systematic field-experiment strategy using the well developed and tested experimental models applied under actual field conditions. In short, field-experiments should be priority. And they are needed at all levels of formal education as well as for EE delivery systems aimed at mass publics, urban and rural. The most recent example of an excellent field-experiment in South Asia is:

Prakash M. Shingi and Bella Mody (1976). "The Communication Effects Gap: A Field Experiment on Television and Agricultural Ignorance in India," Communication Research: An International Quarterly, Vol. 3, No. 2 (April), pp. 171-90.

While it is granted that very general EE guidelines and concepts may help to increase a basic level of awareness among non-professionals, it is the more in-depth and conceptually tight research (survey, case studies, field experiments, etc.) that is the most useful to the experienced practicing professional. After general awareness has been created, more technical and conceptually coherent materials must follow close behind to help satisfy the newly created demand. This phasing necessity is often forgotten or the follow-up materials are so conceptually weak that they may inadvertently promote discontinuence of EE-type programs.

Some key criteria to help evaluate South Asian pilot program proposals might include the following:

(1) cross-cultural transferability/replicability,

(2) geo-cultural distribution (by region),

(3) risk/gain ratio,

(4) diffusibility,

(5) cost/effectiveness ratio (minimum cost alternative),

(6) political willingness of the unit involved ,

(7) relative intensity of need,

(8) degree of local resource contribution (cost sharing),

(9) formal/non-formal coordination and element distribution,

(10) youth/adult coordination and element distribution,

(11) relationship to worldwide framework and recommendations,

(12) scope and degree of popular participation,

(13) built-in evaluative and self-renewing components,

(14) timing and phasing with other parallel projects and plans,

(15) sectorial policy standards,

(16) availability of fiscal resources to continue program on a wider basis,

(17) number of people reached in the "absolute" and "relative" poverty categories,[1]

(18) rate of estimated socio-economic return compared to the opportunity costs of the socio-economic investment (should be at least equal), and

(19) balance between productive and welfare components.

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[1]"Absolute" poverty means an annual per capita income equivalent to $50 or less, whereas "relative" poverty means having incomes above the equivalent of $50, but below one-third of the national average per capita income (The World Bank, The Assault on World Poverty: Problems of Rural Development, Education and Health, London: Johns Hopkins University Press, 1975, p. 4).

The overall South Asian consensus seemed to be that Unesco-UNEP headquarters in Paris could perhaps best administer pilot projects (at the outset anyway) that developed EE strategies aimed at solving environmental problems which are common to all regions of the world but do not have their origins in cross-national or cross-regional interactions. Across this set of problem-types (like soil erosion, deforestration, and human settlements) there is the highest probability of multinational collaboration and success without conflict. And it is in the areas already fertile for collaborative action where Unesco-UNEP should begin.

2.7.11 Research for Unesco-UNEP Paris. A great many of the present and potential EE conceptual difficulties could be avoided if the requisite research were undertaken by Unesco-UNEP in Paris. The confusion caused by lack of conceptual clarity and basic data about EE's target populations and alternative international delivery systems will likely be more costly to Unesco-UNEP in the long-run than it would be now to adequately research EE's concepts and its apparent range of methodologies. Since each country has, to some extent, its own perceptions as to needs and opportunities, Unesco-UNEP should perhaps focus on researching the commonalities across countries and regions--while at the same time encouraging countries to share their differing perceptions.

As a priority concern, Unesco-UNEP might attempt to fully develop a truely international concept of EE. Only then could Unesco-UNEP realistically talk in terms of an international EE program. Unesco-UNEP could, for example, work conceptually to delineate the worldwide common-core elements of all EE programs. If, on the other hand, there are no common elements, then there would be nothing "worldwide" about EE. If there is nothing worldwide about EE, then why is the UN promoting it? Thus, the assumption of worldwide elements must be followed by a delineation and analysis of those elements and their interrelationships for all to view and refine.

EE planning and development activities closely interact with an array of factors, for example:

(1) ecological and socio-economic structural factors,

(2) development goals,

(3) leadership styles,

(4) communication network patterns, and

(5) methodological preferences.

Therefore, it becomes advisable for EE programming to attempt to (1) explicitly delineate those factors and (2) relate them to the EE guidelines offered by Unesco-UNEP, Paris. Doing this as early as possible seems to be a precondition to intelligent and rational planning.

Furthermore, the various value assumptions underlying alternative planned EE strategies should be explicitly delineated and their possible ranges of implications publically discussed before any commitments (overt or implied) are made on a particular course of action. Each EE strategy proposed should also be analyzed for its consistency with the latest applied behavioral research findings to insure that there is indeed some likelihood that the strategy chosen will produce the desired results. And, if other strategies are more likely to produce the desired results, then a clear, explicit justification of why the potentially more effective alternative was discarded should be given. Finally, each proposed EE strategy should be analyzed in terms of how it fits into the professional standards related to social interventions.

EE strategies might also be analyzed in terms of how they relate to the concept of "rising expectations," or the dynamics of Lerner's "want/get ratio." That is, EE should be conceptually related to the existing integral development models being used by less-developed countries in South Asia. EE should be related to existing global change models, and it should develop and evaluate alternative integrations of global and local change models. In sum, then, Unesco-UNEP EE should begin by asking:

(1) What is development?

(2) What is the role of EE in development?

(3) What are the implications for training EE professionals?

(4) What are the implications for agencies and institutions trying to further development?

(5) And, finally, what are the implications of the above for the concept of EE.

While the actual training of EE professionals is perhaps best delegated to the regional and sub-regional levels, the coordination of research and evaluation is probably best centralized in Unesco-UNEP EE headquarters in Paris, or subcontracted therefrom to a major research-oriented university. High research competence is much rarer than other EE competencies, and it would be a misassessment to assume that EE competence was somehow synonymous with EE research competence.

Also, since a review of literature in any substantive area requires an in-depth conceptual knowledge of the field under review in order to know (1) what questions and materials are relevant, (2) which questions have already been answered, and (3) what the gaps are, such synthetic research is clearly best centralized and performed by a scholar/practitioner (or a group of them) rather than just a practitioner. The latter is usually many years behind the collective knowledge of the

substantive area and almost always lacks the technical skills to apply modern analytic tools for organizing and interrelating both the quantitative and qualitative data.

2.7.12 Regional Offices and Readiness. Before international EE decisions are religated to Unesco and/or UNEP regional offices, those offices should demonstrate their (1) readiness, (2) willingness, and (3) capability (procedurally, personnel-wise, and EE content understanding-wise) of assuming the task within the intentions of the global project. If not, then it is possible that regional offices may view scarce EE funds as slack resources to be allocated elsewhere, and perhaps under the guise of the new and popularly attractive EE label.

The overall guiding principle, therefore, should be to develop the operational phases of EE in the South Asian region only after the requisite readiness and adequate information and tools are clearly present. A further consideration might be the breaking down of the region into distinct sub-regions, if the region as a whole decided it was to their advantage. They may decide to do such if the region appears too diverse for EE programming purposes. This potential problem of too much intra-regional diversity should be carefully and explicitly examined very early.

Although the length of the planning cycle should, in principle, increase with the scale of operation (for

example--about 5-years are needed at the national level), there may be a tendency to hold the cycle-length constant on the regional or higher level and thus create the improbability of adequate coordination, timing, and phasing to do what is supposed to be done. Also, the variable of "time" itself must be lengthened or shortened depending upon cultural variations in the value placed on the notion of "time."

In sum, then, some of the preconditions to adequate regional EE programming, as given by individuals interviewed in South Asia are:

(1) adequate regional incentives to engage in EE,

(2) appropriate communication structures (interpersonal and mass),

(3) decentralized extension service-type EE delivery systems,

(4) reinforcing regional infrastructures,

(5) regional knowledge-base (and demonstrated ability to use it),

(6) adequate planning cycles, timing, and phasing, and

(7) common EE vocabulary, with enough specificity and operationalization of terms to insure a high degree of shared meanings of key terms.

2.7.13 Building Relationships Between South Asia and Unesco-UNEP. A few of the key strategies for building effective EE relationships between South Asia and Unesco-UNEP, and among the Asian countries themselves, are:

(1) by generating incentives for solving the type of EE problems that require collaboration in order for the problems to be solved.

(2) by building a temporary organization that contains the representation and linkages desired in another organization, and then merging the new organization with the target organization hence carrying certain structural characteristics into the new organization.

(3) by enhancing the quality and frequency of informal social contacts between current EE-oriented people and the target groups. Small group demonstrations and discussions can be particularly powerful in building the trust and confidence needed for effective interpersonal networks. Although complex interpersonal networks require many years to build, they are especially relevant to the communication modes found throughout South Asia.

There are at least four classifications of the major positive functional roles that Unesco-UNEP could fill at both the global and regional levels:

(1) that of a catalyst to provide incentives to help make latent programs manifest,

(2) that of helper on how to find and evaluate various alternative ways of proceeding in the planning, development, implementation, and/or evaluation of EE programs,

(3) that of suggesting a definite solution to a definite problem upon being requested to do so,

(4) that of linking the interested individuals and/or organizations to the human resources (consultants) and materials which the member states have specifically requested.

2.7.14 Centralized Decentralization. The term "centralized decentralization" has been used to describe the need in South Asia. "Centralization" would be on the regional or sub-regional level, which may even include national or sub-national levels. Because EE is a new program area in South Asia, it is perhaps best to centralize its development until the concept gets well defined (with its terms operationalized) and EE specialists are either trained or emerge. To decentralize to the local level without the needed conceptualizations and resources

only frustrates communication about the concept and thus becomes a constraint to program development. Thus, in the pre-planning phase, a survey and evaluation of potential candidates for a regional center (or centers) would be needed. And perhaps regional centers might also be established around the concept of "centers of excellence" which would be housed in some institution like a large university, but outside any local bureaucracy.

A major consideration concerns whether or not international (within the region or not) EE strategies should be organized around natural "problem-sheds" rather than solely around political boundaries, which may have little to do with the nature of a biophysical problem. In fact, the images people create about social territories often have little correspondence with the non-social dimensions of biophysical problems. And at times political boundaries, although necessary for social organization, often become one of the major constraints to global, regional, and national environmental problem-solving.

Timing and phasing are particularly important as one begins to talk about centralization/decentralization issues. Once the hierarchy is set up, programmatic attempts on one level effect all other levels both horizontally and vertically. On some level, some degree of centralization is necessary for purposes of coordination and efficiency.

But regardless of the level of centralization, a systematically developed EE plan is a necessary precondition to efficient and effective EE in South Asia. Most significantly, perhaps, South Asia should avoid initiating a "crash program" in the style often found in some Westernized planning models and styles. The implicit assumptions behind these "crash" models not only are very unlikely to fit South Asian cultures, but they apparently do not fit their problems either. Besides, "crash" models usually have longer-range backlashes of the kinds which many of the more-developed countries are just now beginning to experience. Therefore, the region should perhaps proceed from a valid and reliable problem analysis and need assessment (which require careful planning and sufficient time), followed by a gradual unfoldment of their own EE programs in deliberately systematic phases with the attendant ongoing need-sensing mechanisms.

2.7.15 Toward a Global Strategy. First, since Unesco-UNEP is in the education business, I would strongly recommend that it begin educating by avoiding where possible such imprecise descriptors of world conditions as "developing" and "developed" countries. Such terms have little, if any, correspondence to "objective" data. They simply imply attributes which do not exist, hence they actually lead to problem misunderstanding.

The term "developed," for instance, implies that a country or region has, in effect, "arrived" at some end

or standard--the narrowly conceived economic one which has now been replaced in most international circles by "Quality of Life" indicators. The term "developing," on the other hand, implies movement toward that "developed" standard which the so-called "developed" countries have allegedly reached. Even given the assumption of the out-dated economic standard, the reality of the situation is that the vast majority of the "developing" countries have not been developing very much at all. While, on the other hand, the developed countries are still and rapidly developing. But, of course, it is rather presumptuous to assume that countries with high levels of environmental degradation, wide socio-economic gaps, racial conflicts, high crime rates, etc. are in fact "developed." Such social and bio-physical indicators seem to reflect a lack of adequate development, if one moves off the confines of aggregate economic measures alone.

To compound the matter even further, the use of the so-called "developed" countries as fixed yardsticks against which to measure what happens in "developing" countries is, to me, rather ethnocentric. I believe, like many of those I interviewed in South Asia, that we must begin cleaning up our semantic environment right away as a part of the Unesco-UNEP international EE program. We should perhaps adopt such terminology as "more-developed"

and "less-developed," thus placing all countries on a development continuum defined by a series of "Quality of Life" indices relevant to the UN's purposes. In this way, our words become part of the solution rather than part of the problem.

Second, one might expect EE to converge with population education or other "educations" within the next 10-years or so. Although this is clearly advisable in the long-run, it would weaken both EE, population education, etc. to do so at this time. Why? Because most formal social organizations in South Asia are so structurally rigid that it is going to be difficult to get either EE or population education, for example, institutionalized in the first place, although many institutions may rapidly take on the early rhetoric but not the essence of the EE concept. And since large-scale funding of, say, population education programs in South Asia is coming to an end, the press for convergence may be very great indeed--for population education's vested interests need the financial input that EE can help supply.

Also, the conceptual complexity and inclusiveness of terms like EE and population education promote the rhetorical-type adoption without the necessary structural revisions. And since both EE and population education are currently undergoing conceptual development themselves, no adequate convergence is possible without the risk of

one or the other being washed-out entirely. And the world cannot afford that. So, until each conceptually matures and develops modes of practice which functionally utilize research evidence (that is, it is able to put its own house in order), it is to the advantage of each, and to the advantage of all countries, regions, and the world to let each have its own thrust for the time being.

Finally, every EE innovation must be coupled with a wider process of social innovation and renewal in order to implement the EE innovation. Social structural innovations are needed in order to process EE innovations per sé. To attempt to diffuse imprecise concepts (which are so prevalent in the EE literature), rather than trying to identify and influence the critical factors underlying planned change processes, may perhaps lead to increased confusion in South Asia and eventually wash-out the validity of the EE concept.

Stress, therefore, should perhaps be placed on macro-level change skills within a general systems theoretic framework at the regional and country level infrastructures vis-à-vis EE-type problems, and not at the micro-level where most EE-type skills in the more-developed countries predominate. The micro-level's limits to change are boundaried by the floors and ceilings of the larger social system and its institutional arrangements. Little significant is likely to happen to further development in

South Asia until system-wide changes have been set into motion. EE should thus become part of that overall development effort in order to have a functionally significant role in South Asia.

In sum, then, the future of EE in South Asia is likely to be directly dependent upon (1) how well EE can get itself together, and upon (2) how well it can integrate itself into overall development efforts. Unesco-UNEP stands at the helm with the potential of intelligently guiding that process. Its challenge is to do it. Its major responsibility is to the some 2,000,000,000 men, women, and children who live in poverty in the more than 100 countries of the less-developed world. I think it can be done.

3.0 FEEDBACK QUESTIONNIARE

As mentioned in the Introduction of this report, the reader should bear in mind that this is a tentative, on-going analysis of some of the conceptual and practical problems and opportunities likely to be associated with EE in South Asia. So that the reader may contribute to further analyses of EE in South Asia, impressions of this "Overview" are earnestly sought. Beginning on the following page, a feedback questionnaire is attached to record your reactions.

Feedback Questionnaire

for

Final Report of Environmental Education Mission to South Asia in 1975--*Overview* (by B.R. Horn)

On a separate sheet of paper, please answer the following questions, or other questions you may have. Please do not detach these questions from this report so that other readers may also respond to them.

1. To what extent did you feel that your own perceptions agreed with the overall conclusions and recommendations of the report?

2. Which major points did you feel were most accurate in describing the EE situation in your country?

3. Were there any points made in the report which you felt were inaccurate? If so, please specify.

4. What, if any, major problems and/or opportunities concerning EE in South Asia were omitted from the report?

5. Can you indicate any major sources of information (articles, people, books, reports, etc.) in your country which could provide additional data about the problems and opportunities mentioned in the report?

Please mail your comments to B. Ray Horn, Environmental Education Program, School of Natural Resources, The University of Michigan, Ann Arbor, Michigan 48104 USA; or, send to your nearest Unesco office asking them to forward your comments to the author.

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